

Attachment B

SOURCES OF PAYMENT UNIT ESTIMATES FOR FY 2001

In order to calculate individual service fees for FY 2001, we adjusted FY 2000 payment units for each service to more accurately reflect expected FY 2001 payment liabilities. We obtained our updated estimates through a variety of means. For example, we used Commission licensee data bases, actual prior year payment records and industry and trade association projections when available. We tried to obtain verification for these estimates from multiple sources and, in all cases, we compared FY 2001 estimates with actual FY 2000 payment units to ensure that our revised estimates were reasonable. Where appropriate, we adjusted and/or rounded our final estimates to take into consideration the fact that certain variables that impact on the number of payment units cannot yet be estimated exactly. These include an unknown number of waivers and/or exemptions that may occur in FY 2001 and the fact that, in many services, the number of actual licensees or station operators fluctuates from time to time due to economic, technical or other reasons. Therefore, when we note, for example, that our estimated FY 2001 payment units are based on FY 2000 actual payment units, it does not necessarily mean that our FY 2001 projection is exactly the same number as FY 2000. It means that we have either rounded the FY 2001 number or adjusted it slightly to account for these variables.

FEE CATEGORY	SOURCES OF PAYMENT UNIT ESTIMATES
Land Mobile (All), Microwave, 218-219 MHz ¹⁴⁹ , Marine (Ship & Coast), Aviation (Aircraft & Ground), GMRS, Amateur Vanity Call Signs, Domestic Public Fixed	Based on Wireless Telecommunications Bureau (WTB) projections of new applications and renewals taking into consideration existing Commission licensee data bases. Aviation (Aircraft) and Marine (Ship) estimates have been adjusted to take into consideration the licensing of portions of these services on a voluntary basis.
CMRS Mobile Services	Based on Wireless Telecommunications Bureau estimates.
CMRS Messaging Services	Based on Wireless Telecommunications Bureau estimates..
AM/FM Radio Stations	Based on estimates from Data World, Inc.
UHF/VHF Television Stations	Based on Mass Media Bureau estimates and actual FY 2000 payment units.
AM/FM/TV Construction Permits	Based on actual FY 2000 payment units.
LPTV, Translators and Boosters	Based on actual FY 2000 payment units.
Auxiliaries	Based on Wireless Telecommunications Bureau estimates.
MDS/MMDS	Based on Mass Media Bureau estimates.
Cable Antenna Relay Service (CARS)	Based on actual FY 2000 payment units.
Cable Television System Subscribers	Based on Cable Services Bureau and industry estimates of subscribership.
Interstate Telephone Service Providers	Based on actual FY 2000 interstate revenues associated with the Telecommunications Reporting Worksheet, adjusted to take into consideration FY 2001 revenue growth in this industry as estimated by the Common Carrier Bureau.
Earth Stations	Based on International Bureau estimates.
Space Stations (GSOs & NGSOs)	Based on International Bureau licensee data bases.
International Bearer Circuits	Based on actual FY 2000 payment units.
International HF Broadcast Stations, International Public Fixed Radio Service	Based on actual FY 2000 payment units.

¹⁴⁹ The Wireless Telecommunications Bureau's staff advises that they anticipate receiving only 25 applications for 218-219 MHz (formerly IVDS) in FY 2001.

Attachment C

CALCULATION OF FY 2001 REVENUE REQUIREMENTS AND PRO-RATA FEES

Fee Category	FY 2001 Payment Units	Payment Years	FY 2000 Revenue Estimate	Pro-Rated FY 2001 Revenue Requirement**	Computed New FY 2001 Regulatory Fee	Rounded New FY 2001 Regulatory Fee	Expected FY 2001 Revenue
PLMRS (Exclusive Use)	5,500	10	239,408	257,962	9	5	275,000
PLMRS (Shared use)	58,000	10	1,934,808	2,084,756	4	5	2,900,000
Microwave	23,900	10	787,525	848,558	4	5	1,195,000
218-219 MHz (Formerly IVDS)	25	10	0	0	0	10	1,250
Marine (Ship)	5,500	10	427,444	460,571	8	10	550,000
GMRS	2,000	5	66,718	71,889	7	5	50,000
Aviation (Aircraft)	3,500	10	223,889	241,240	7	5	175,000
Marine (Coast)	1,300	10	50,886	54,830	4	5	65,000
Aviation (Ground)	1,700	5	59,367	63,968	8	10	85,000
Amateur Vanity Call Signs	10,000	10	112,000	120,680	1.21	1.20	120,000
AM Class A	76	1	135,000	145,463	1,914	1,925	146,300
AM Class B	1,620	1	1,674,750	1,804,543	1,114	1,115	1,806,300
AM Class C	998	1	576,290	620,952	622	620	618,760
AM Class D	2,086	1	1,880,940	2,026,713	998	975	2,033,850
FM Classes A, B1 & C3	2,080	1	3,857,200	4,156,133	1,998	2,000	4,160,000
FM Classes B, C, C1 & C2	3,039	1	4,790,625	5,161,898	1,699	1,700	5,166,300
AM Construction Permits	58	1	15,000	16,163	279	280	16,240
FM Construction Permits	300	1	257,455	277,408	925	925	277,500
Satellite TV	127	1	87,500	94,281	742	740	93,980
Satellite TV Construction Permit	4	1	1,780	1,918	479	480	1,920
VHF Markets 1-10	42	1	1,757,800	1,894,030	45,096	45,100	1,894,200
VHF Markets 11-25	59	1	1,796,850	1,936,106	32,815	32,825	1,936,675
VHF Markets 26-50	77	1	1,524,250	1,642,379	21,330	21,325	1,642,025
VHF Markets 51-100	115	1	1,466,250	1,579,884	13,738	13,750	1,581,250
VHF Remaining Markets	211	1	643,500	693,371	3,286	3,275	691,025
VHF Construction Permits	18	1	51,300	55,276	3,071	3,075	55,350
UHF Markets 1-10	75	1	1,055,250	1,137,032	15,160	15,150	1,136,250
UHF Markets 11-25	75	1	856,875	923,283	12,310	12,300	922,500
UHF Markets 26-50	110	1	721,650	777,578	7,069	7,075	778,250
UHF Markets 51-100	165	1	625,300	673,761	4,083	4,075	672,375
UHF Remaining Markets	175	1	187,450	201,977	1,154	1,150	201,250
UHF Construction Permits	70	1	260,400	280,581	4,008	4,000	280,000
Auxiliaries	27,000	1	261,701	281,983	10	10	270,000
International HF Broadcast	4	1	2,525	2,721	680	680	2,720
LPTV/Translators/Boosters	2,700	1	758,800	817,607	303	305	823,500
CARS	1,700	1	89,933	96,903	57	55	93,500
Cable Systems	67,700,000	1	31,027,233	33,431,844	0.49	0.49	33,431,844
Interstate Telephone Service Providers	70,686,000,000	1	86,670,419	93,387,376	0.00132	0.00132	93,387,376
CMRS Mobile Services (Cellular/Public Mobile)	90,000,000	1	25,433,429	27,404,520	0.30	0.30	27,404,520
CMRS Messaging Services	30,000,000	1	1,508,171	1,625,054	0.05	0.05	1,625,054
MDS/MMDS/LMDS	2,000	1	834,900	899,605	450	450	900,000
International Bearer Circuits	840,451	1	4,041,141	4,354,329	5	5	4,202,255
International Public Fixed	1	1	1,185	1,277	1,277	1,275	1,275
Earth Stations	2,784	1	468,825	505,159	181	180	501,120
Space Stations (Geostationary)	66	1	6,010,275	6,476,071	98,122	98,125	6,476,250
Space Stations (Non-geostationary)	6	1	525,750	566,496	94,416	94,425	566,550
***** Total Estimated Revenue to be Collected			185,759,747	200,156,127			201,214,514
***** Total Revenue Requirement				200,146,000			200,146,000
Difference				10,127			1,068,514

** 1.0775 factor applied

FY 2001 SCHEDULE OF REGULATORY FEES

(PROPOSED)

Fee Category	Annual Regulatory Fee (U.S. \$'s)
PLMRS (per license) (Exclusive Use) (47 CFR part 90)	5
Microwave (per license) (47 CFR part 101)	5
218-219 MHz (Formerly Interactive Video Data Service) (per license) (47 CFR part 95)	10
Marine (Ship) (per station) (47 CFR part 80)	10
Marine (Coast) (per license) (47 CFR part 80)	5
General Mobile Radio Service (per license) (47 CFR part 95)	5
PLMRS (Shared Use) (per license) (47 CFR part 90)	5
Aviation (Aircraft) (per station) (47 CFR part 87)	5
Aviation (Ground) (per license) (47 CFR part 87)	10
Amateur Vanity Call Signs (per call sign) (47 CFR part 97)	1.20
CMRS Mobile Services (per unit) (47 CFR parts 20, 22, 24, 27, 80 and 90)	.30
CMRS Messaging Services (per unit) (47 CFR parts 20, 22, 24 and 90)	.05
Multipoint Distribution Services (Includes MMDS & LMDS)(per call sign) (47 CFR parts 21 and 101)	450
AM Radio Construction Permits	280
FM Radio Construction Permits	925
TV (47 CFR part 73) VHF Commercial	
Markets 1-10	45,100
Markets 11-25	32,825
Markets 26-50	21,325

Fee Category	Annual Regulatory Fee (U.S. \$'s)
Markets 51-100	13,750
Remaining Markets	3,275
Construction Permits	3,075
TV (47 CFR part 73) UHF Commercial	
Markets 1-10	15,150
Markets 11-25	12,300
Markets 26-50	7,075
Markets 51-100	4,075
Remaining Markets	1,150
Construction Permits	4,000
Satellite Television Stations (All Markets)	740
Construction Permits - Satellite Television Stations	480
Low Power TV, TV/FM Translators & Boosters (47 CFR part 74)	305
Broadcast Auxiliary (47 CFR part 74)	10
CARS (47 CFR part 78)	55
Cable Television Systems (per subscriber) (47 CFR part 76)	.49
Interstate Telephone Service Providers (per revenue dollar)	.00132
Earth Stations (47 CFR part 25)	180
Space Stations (per operational station in geostationary orbit) (47 CFR part 25) also includes Direct Broadcast Satellite Service (per operational station) (47 CFR part 100)	98,125
Space Stations (per operational system in non-geostationary orbit) (47 CFR part 25)	94,425
International Bearer Circuits (per active 64KB circuit)	5
International Public Fixed (per call sign) (47 CFR part 23)	1,275
International (HF) Broadcast (47 CFR part 73)	680

RADIO STATION REGULATORY FEES						
Population Served	AM Class A	AM Class B	AM Class C	AM Class D	FM Classes A, B1 & C3	FM Classes B, C, C1 & C2
<=20,000	450	350	250	300	350	450
20,001 - 50,000	850	675	350	475	675	850
50,001 - 125,000	1,375	900	475	700	900	1,375
125,001 - 400,000	2,050	1,450	725	875	1,450	2,050
400,001 - 1,000,000	2,850	2,300	1,300	1,550	2,300	2,850
>1,000,000	4,550	3,750	1,900	2,400	3,750	4,550

Attachment E

COMPARISON BETWEEN FY 2000 & FY 2001 PROPOSED REGULATORY FEES

Fee Category	Annual Regulatory Fee FY 2000	NPRM Proposed Fee FY 2001	Annual Regulatory Fee FY 2001
PLMRS (per license) (Exclusive Use) (47 CFR part 90)	13	5	
Microwave (per license) (47 CFR part 101)	13	5	
218-219 MHz (Formerly Interactive Video Data Service) (per license) (47 CFR part 95)	13	10	
Marine (Ship) (per station) (47 CFR part 80)	7	10	
Marine (Coast) (per license) (47 CFR part 80)	7	5	
General Mobile Radio Service (per license) (47 CFR part 95)	7	5	
PLMRS (Shared Use) (47 CFR part 90)	7	5	
Aviation (Aircraft) (per station) (47 CFR part 87)	7	5	
Aviation (Ground) (per license) (47 CFR part 87)	7	10	
Amateur Vanity Call Signs (per call sign) (47 CFR part 97)	1.40	1.20	
CMRS Mobile Services (per unit) (47 CFR parts 20, 22, 24, 27, 80 and 90)	.31	.30	
CMRS Messaging Services (per unit) (47 CFR parts 20, 22, 24 and 90)	.04	.05	
Multipoint Distribution Services (Includes MMDS and LMDS)(per call sign) (47 CFR part 21 and 101)	275	450	
AM Construction Permits	250	280	
FM Construction Permits	755	925	
TV (47 CFR part 73) VHF Commercial			
Markets 1-10	39,950	45,100	
Markets 11-25	33,275	32,825	
Markets 26-50	22,750	21,325	
Markets 51-100	12,750	13,750	

Fee Category	Annual Regulatory Fee FY 2000	NPRM Proposed Fee FY 2001	Annual Regulatory Fee FY 2001
Remaining Markets	3,300	3,275	
Construction Permits	2,700	3,075	
TV (47 CFR part 73) UHF Commercial			
Markets 1-10	15,075	15,150	
Markets 11-25	11,425	12,300	
Markets 26-50	7,075	7,075	
Markets 51-100	4,225	4,075	
Remaining Markets	1,150	1,150	
Construction Permits	2,800	4,000	
Satellite Television Stations (All Markets)	1,250	740	
Construction Permits – Satellite Television Stations	445	480	
Low Power TV, TV/FM Translators & Boosters (47 CFR part 74)	280	305	
Broadcast Auxiliary (47 CFR part 74)	12	10	
CARS (47 CFR part 78)	53	55	
Earth Stations (47 CFR part 25)	175	180	
Cable Television Systems (per subscriber) (47 CFR part 76)	.47	.49	
Interstate Telephone Service Providers (per revenue dollar)	.00117	.00132	
Space Stations (per operational station in geostationary orbit) (47 CFR part 25) also includes Direct Broadcast Satellite Service (per operational station) (47 CFR part 100)	94,650	98,125	
Space Stations (per operational system in non-geostationary orbit) (47 CFR part 25)	175,250	94,425	
International Bearer Circuits (per active 64KB circuit)	7	5	
International Public Fixed (per call sign) (47 CFR part 23)	395	1,275	
International (HF) Broadcast (47 CFR part 73)	505	680	

FY 2000 RADIO STATION REGULATORY FEES						
Population Served	AM Class A	AM Class B	AM Class C	AM Class D	FM Classes A, B1 & C3	FM Classes B, C, C1 & C2
<=20,000	400	300	200	250	300	400
20,001 - 50,000	800	625	300	425	625	800
50,001 - 125,000	1,325	850	425	650	850	1,325
125,001 - 400,000	1,950	1,350	625	775	1,350	1,950
400,001 - 1,000,000	2,725	2,200	1,200	1,450	2,200	2,725
>1,000,000	4,375	3,575	1,725	2,225	3,575	4,375

FY 2001 RADIO STATION REGULATORY FEES						
Population Served	AM Class A	AM Class B	AM Class C	AM Class D	FM Classes A, B1 & C3	FM Classes B, C, C1 & C2
<=20,000	450	350	250	300	350	450
20,001 - 50,000	850	675	350	475	675	850
50,001 - 125,000	1,375	900	475	700	900	1,375
125,001 - 400,000	2,050	1,450	725	875	1,450	2,050
400,001 - 1,000,000	2,850	2,300	1,300	1,550	2,300	2,850
>1,000,000	4,550	3,750	1,900	2,400	3,750	4,550

Attachment F

DETAILED GUIDANCE ON WHO MUST PAY REGULATORY FEES

1. The guidelines below provide an explanation of regulatory fee categories established by the Schedule of Regulatory Fees in section 9 (g) of the Communications Act,¹⁵⁰ as modified in the instant NPRM. Where regulatory fee categories need interpretation or clarification, we have relied on the legislative history of section 9, our own experience in establishing and regulating the Schedule of Regulatory Fees for Fiscal Years (FY) 1994 through 2000, and the services subject to the fee schedule. The categories and amounts set out in the schedule have been modified to reflect changes in the number of payment units, additions and changes in the services subject to the fee requirement and the benefits derived from the Commission's regulatory activities, and to simplify the structure of the schedule. The schedule may be similarly modified or adjusted in future years to reflect changes in the Commission's budget and in the services regulated by the Commission.¹⁵¹

2. Exemptions. Governments and nonprofit entities are exempt from paying regulatory fees and should not submit payment. A nonprofit entity is required to have on file with the Commission an IRS Determination Letter documenting that it is exempt from taxes under section 501 of the Internal Revenue Code or the certification of a governmental authority attesting to its nonprofit status. In instances where the IRS Determination Letter or the letter of certification from a governmental authority attesting to its nonprofit status is not sufficiently current, the nonprofit entity may be asked to submit more current documentation. The governmental exemption applies even where the government-owned or community-owned facility is in competition with a commercial operation. Other specific exemptions are discussed below in the descriptions of other particular service categories.

1. Private Wireless Radio Services

3. Two levels of statutory fees were established for the Private Wireless Radio Services -- exclusive use services and shared use services. Thus, licensees who generally receive a higher quality communication channel due to exclusive or lightly shared frequency assignments will pay a higher fee than those who share marginal quality assignments. This dichotomy is consistent with the directive of section 9, that the regulatory fees reflect the benefits provided to the licensees.¹⁵² In addition, because of the generally small amount of the fees assessed against Private Wireless Radio Service licensees, applicants for new licenses

¹⁵⁰ 47 U.S.C. 159(g)

¹⁵¹ 47 U.S.C. 159(b)(2), (3).

¹⁵² 47 U.S.C. 159(b)(1)(A).

and reinstatements and for renewal of existing licenses are required to pay a regulatory fee covering the entire license term, with only a percentage of all licensees paying a regulatory fee in any one year. Applications for modification or assignment of existing authorizations do not require the payment of regulatory fees. The expiration date of those authorizations will reflect only the unexpired term of the underlying license rather than a new license term.

a. Exclusive Use Services

4. Private Land Mobile Radio Services (PLMRS) (Exclusive Use) : Regulatees in this category include those authorized under part 90 of the Commission's Rules to provide limited access Wireless Radio service that allows high quality voice or digital communications between vehicles or to fixed stations to further the business activities of the licensee. These services, using the 220-222 MHz band and frequencies at 470 MHz and above, may be offered on a private carrier basis in the Specialized Mobile Radio Services (SMRS).¹⁵³ For FY 2001, PLMRS licensees will pay a \$5 annual regulatory fee per license, payable for an entire ten-year license term at the time of application for a new, renewal, or reinstatement license.¹⁵⁴ The total regulatory fee due is \$50 for the ten-year term.

5. Microwave Services: These services include private and commercial microwave systems and private and commercial carrier systems authorized under part 101 of the Commission's Rules to provide telecommunications services between fixed points on a high quality channel of communications. Microwave systems are often used to relay data and to control railroad, pipeline, and utility equipment. Commercial systems typically are used for video or data transmission or distribution. For FY 2001, Microwave licensees will pay a \$5 annual regulatory fee per license, payable for an entire ten-year license term at the time of application for a new, renewal, or reinstatement license. The total regulatory fee due is \$50 for the ten-year license term.

6. 218-219 MHz (Formerly Interactive Video Data Service (IVDS)): The 218-219 MHz service is a two-way, point-to-multi-point radio service allocated high quality channels of communications and authorized under part 95 of the Commission's Rules. The 218-219 MHz service provides information, products, and services, and also the capability to obtain responses from subscribers in a specific service area. The 218-219 MHz service is offered on a private carrier basis. The Commission did not anticipate receiving any applications in the 218-219 MHz service during FY 2000. For FY 2001, we anticipate receiving 25 applications and propose that the annual regulatory fee for 218-219 MHz licensees be set at \$10 per application. The total regulatory fee due would be \$50 for the five-year license term.

¹⁵³ This category only applies to licensees of shared-use private 220-222 MHz and 470 MHz and above in the Specialized Mobile Radio (SMR) service who have elected not to change to the Commercial Mobile Radio Service (CMRS). Those who have elected to change to the CMRS are referred to paragraph 14 of this Attachment.

¹⁵⁴ Although this fee category includes licenses with ten-year terms, the estimated volume of ten-year license applications in FY 2000 is less than one-tenth of one percent and, therefore, is statistically insignificant.

b. Shared Use Services

7. Marine (Ship) Service: This service is a shipboard radio service authorized under part 80 of the Commission's Rules to provide telecommunications between watercraft or between watercraft and shore-based stations. Radio installations are required by domestic and international law for large passenger or cargo vessels. Radio equipment may be voluntarily installed on smaller vessels, such as recreational boats. The Telecommunications Act of 1996 gave the Commission the authority to license certain ship stations by rule rather than by individual license. The Commission exercises that authority. Private boat operators sailing entirely within domestic U.S. waters and who are not otherwise required by treaty or agreement to carry a radio, are no longer required to hold a marine license, and they will not be required to pay a regulatory fee. For FY 2001, parties required to be licensed and those choosing to be licensed for Marine (Ship) Stations will pay a \$10 annual regulatory fee per station, payable for an entire ten-year license term at the time of application for a new, renewal, or reinstatement license. The total regulatory fee due is \$100 for the ten-year license term.
8. Marine (Coast) Service: This service includes land-based stations in the maritime services, authorized under part 80 of the Commission's Rules, to provide communications services to ships and other watercraft in coastal and inland waterways. For FY 2001, licensees of Marine (Coast) Stations will pay a \$5 annual regulatory fee per call sign, payable for the entire ten-year license term at the time of application for a new, renewal, or reinstatement license. The total regulatory fee due is \$50 per call sign for the ten-year license term.
9. Private Land Mobile Radio Services (PLMRS)(Shared Use): These services include Land Mobile Radio Services operating under parts 90 and 95 of the Commission's Rules. Services in this category provide one- or two-way communications between vehicles, persons or fixed stations on a shared basis and include radiolocation services, industrial radio services, and land transportation radio services. For FY 2001, licensees of services in this category will pay a \$5 annual regulatory fee per call sign, payable for an entire ten-year license term at the time of application for a new, renewal, or reinstatement license. The total regulatory fee due is \$50 for the ten-year license term.
10. Aviation (Aircraft) Service: These services include stations authorized to provide communications between aircraft and between aircraft and ground stations and include frequencies used to communicate with air traffic control facilities pursuant to part 87 of the Commission's Rules. The Telecommunications Act of 1996 gave the Commission the authority to license certain aircraft radio stations by rule rather than by individual license. The commission exercises that authority. Private aircraft operators flying entirely within domestic U.S. airspace and who are not otherwise required by treaty or agreement to carry a radio are no longer required to hold an aircraft license, and they will not be required to pay a regulatory fee. For FY 2001, parties required to be licensed and those choosing to be licensed for Aviation (Aircraft) Stations will pay a \$5 annual regulatory fee per station, payable for the entire ten-year license term at the time of application for a new, renewal, or reinstatement license. The total regulatory fee due is \$50 per station for

the ten-year license term.

11. Aviation (Ground) Service: This service includes stations authorized to provide ground-based communications to aircraft for weather or landing information, or for logistical support pursuant to part 87 of the Commission's Rules. Certain ground-based stations which only serve itinerant traffic, i.e., possess no actual units on which to assess a fee, are exempt from payment of regulatory fees. For FY 2001, licensees of Aviation (Ground) Stations will pay a \$10 annual regulatory fee per license, payable for the entire five-year license term at the time of application for a new, renewal, or reinstatement license. The total regulatory fee is \$50 per call sign for the five-year license term.

12. General Mobile Radio Service (GMRS): These services include Land Mobile Radio licensees providing personal and limited business communications between vehicles or to fixed stations for short-range, two-way communications pursuant to part 95 of the Commission's Rules. For FY 2001, GMRS licensees will pay a \$5 annual regulatory fee per license, payable for an entire five-year license term at the time of application for a new, renewal or reinstatement license. The total regulatory fee due is \$25 per license for the five-year license term.

c. Amateur Radio Vanity Call Signs

13. Amateur Vanity Call Signs: This category covers voluntary requests for specific call signs in the Amateur Radio Service authorized under part 97 of the Commission's Rules. Applicants for Amateur Vanity Call-Signs will continue to pay a \$1.40 annual regulatory fee per call sign, as prescribed in the FY 2000 fee schedule, payable for an entire ten-year license term at the time of application for a vanity call sign until the FY 2001 fee schedule becomes effective. The total regulatory fee due would be \$14 per license for the ten-year license term.¹⁵⁵ For FY 2001, Amateur Vanity Call Sign applicants will pay a \$1.20 annual regulatory fee per call sign, payable for an entire ten-year term at the time of application for a new, renewal or reinstatement license. The total regulatory fee due is \$12 per call sign for the ten-year license term.

d. Commercial Wireless Radio Services

14. Commercial Mobile Radio Services (CMRS) Mobile Services: The Commercial Mobile Radio Service (CMRS) is an "umbrella" descriptive term attributed to various existing broadband services authorized to provide interconnected mobile radio services for profit to the public, or to such classes of eligible users as to be effectively available to a substantial portion of the public. CMRS Mobile Services include certain licensees which formerly were licensed as part of the Private Radio Services (e.g., Specialized Mobile Radio Services) and others formerly licensed as part of the Common Carrier Radio

¹⁵⁵ Section 9(h) exempts "amateur radio operator licenses under part 97 of the Commission's rules (47 CFR part 97)" from the requirement. However, section 9(g)'s fee schedule explicitly includes "Amateur vanity call signs" as a category subject to the payment of a regulatory fee.

Services (e.g., Public Mobile Services and Cellular Radio Service). While specific rules pertaining to each covered service remain in separate parts 22, 24, 27, 80 and 90, general rules for CMRS are contained in part 20. CMRS Mobile Services will include: Specialized Mobile Radio Services (part 90);¹⁵⁶ Broadband Personal Communications Services (part 24), Public Coast Stations (part 80); Public Mobile Radio (Cellular, 800 MHz Air-Ground Radiotelephone, and Offshore Radio Services) (part 22); and Wireless Communications Service (part 27). Each licensee in this group will pay an annual regulatory fee for each mobile or cellular unit (mobile or telephone number), assigned to its customers, including resellers of its services. For FY 2001, the regulatory fee is \$.30 per unit.

15. Commercial Mobile Radio Services (CMRS) Messaging Services: The Commercial Mobile Radio Service (CMRS) is an "umbrella" descriptive term attributed to various existing narrowband services authorized to provide interconnected mobile radio services for profit to the public, or to such classes of eligible users as to be effectively available to a substantial portion of the public. CMRS Messaging Services include certain licensees which formerly were licensed as part of the Private Radio Services (e.g., Private Paging and Radiotelephone Service), licensees formerly licensed as part of the Common Carrier Radio Services (e.g., Public Mobile One-Way Paging), licensees of Narrowband Personal Communications Service (PCS) (e.g., one-way and two-way paging), and 220-222 MHz Band and Interconnected Business Radio Service. In addition, this category includes small SMR systems authorized for use of less than 10 MHz of bandwidth. While specific rules pertaining to each covered service remain in separate parts 22, 24 and 90, general rules for CMRS are contained in part 20. Each licensee in the CMRS Messaging Services will pay an annual regulatory fee for each unit (pager, telephone number, or mobile) assigned to its customers, including resellers of its services. For FY 2001, the regulatory fee is \$.05 per unit.

16. Finally, we are reiterating our definition of CMRS payment units to say that fees are assessable on each PCS or cellular telephone and each one-way or two-way pager capable of receiving or transmitting information, whether or not the unit is "active" on the "as-of" date for payment of these fees. The unit becomes "feeable" if the unit end user or assignee has possession of the unit and the unit is capable of transmitting or receiving voice or non-voice messages or data, and the unit is either owned or operated by the licensee of the CMRS system or a reseller, or the end user of a unit has a contractual agreement for the provision of a CMRS service from a CMRS system licensee or a CMRS service reseller. The responsible payer of the regulatory fee is the CMRS licensee. For example, John Doe purchases a pager and obtains a paging services contract from Paging Licensee X. Paging Licensee X is responsible for paying the applicable regulatory fee for this unit. Likewise, Cellular Licensee Y donates cellular phones to a high school and the high school either pays for or obtains free cellular service from Cellular Licensee Y. In this situation, Cellular Licensee Y is responsible for paying the applicable regulatory fees for these units.

¹⁵⁶ This category does not include licensees of private shared-use 220 MHz and 470 MHz and above in the Specialized Mobile Radio (SMR) service who have elected to remain non-commercial. Those who have elected not to change to the Commercial Mobile Radio Service (CMRS) are referred to paragraph 4 of this Attachment.

2. Mass Media Services

17. The regulatory fees for the Mass Media fee category apply to broadcast licensees and permittees. Noncommercial Educational Broadcasters are exempt from regulatory fees.

a. Commercial Radio

18. These categories include licensed Commercial AM (Classes A, B, C, and D) and FM (Classes A, B, B1, C, C1, C2, and C3) Radio Stations operating under part 73 of the Commission's Rules.¹⁵⁷ We have combined class of station and city grade contour population data to formulate a schedule of radio fees which differentiate between stations based on class of station and population served. In general, higher class stations and stations in metropolitan areas will pay higher fees than lower class stations and stations located in rural areas. The specific fee that a station must pay is determined by where it ranks after weighting its fee requirement (determined by class of station) with its population. The regulatory fee classifications for Radio Stations for FY 2001 are as follows:

FY 2001 RADIO STATION REGULATORY FEES						
Population Served	AM Class A	AM Class B	AM Class C	AM Class D	FM Classes A, B1 & C3	FM Classes B, C, C1 & C2
<=20,000	450	350	250	300	350	450
20,001 - 50,000	850	675	350	475	675	850
50,001 - 125,000	1,375	900	475	700	900	1,375
125,001 - 400,000	2,050	1,450	725	875	1,450	2,050
400,001 - 1,000,000	2,850	2,300	1,300	1,550	2,300	2,850
>1,000,000	4,550	3,750	1,900	2,400	3,750	4,550

19. Licensees may determine the appropriate fee payment by referring to the FCC's internet world wide

¹⁵⁷ The Commission acknowledges that certain stations operating in Puerto Rico and Guam have been assigned a higher level station class than would be expected if the station were located on the mainland. Although this results in a higher regulatory fee, we believe that the increased interference protection associated with the higher station class is necessary and justifies the fee.

web site (<http://www.fcc.gov>) or by calling the FCC's National Call Center (1-888-225-5322). The same information may be included in the Public Notices mailed to each licensee for which we have a current address on file (**Note: Non-receipt of a Public Notice does not relieve a licensee of its obligation to submit its regulatory fee payment**).

b. Construction Permits - Commercial AM Radio

20. This category includes holders of permits to construct new Commercial AM Stations. For FY 2001, permittees will pay a fee of \$280 for each permit held. Upon issuance of an operating license, this fee would no longer be applicable and licensees would be required to pay the applicable fee for the designated group within which the station appears.

c. Construction Permits - Commercial FM Radio

21. This category includes holders of permits to construct new Commercial FM Stations. For FY 2001, permittees will pay a fee of \$925 for each permit held. Upon issuance of an operating license, this fee would no longer be applicable. Instead, licensees would pay a regulatory fee based upon the designated group within which the station appears.

d. Commercial Television Stations

22. This category includes licensed Commercial VHF and UHF Television Stations covered under part 73 of the Commission's Rules, except commonly owned Television Satellite Stations, addressed separately below. Markets are Nielsen Designated Market Areas (DMA) as listed in the Television & Cable Factbook, Stations Volume No. 69, 2001 Edition, Warren Publishing, Inc. The fees for each category of station are as follows:

VHF Markets 1-10.....	\$45,100
VHF Markets 11-25.....	32,825
VHF Markets 26-50.....	21,325
VHF Markets 51-100.....	13,750
VHF Remaining Markets.....	3,275
UHF Markets 1-10.....	\$15,150
UHF Markets 11-25.....	12,300
UHF Markets 26-50.....	7,075
UHF Markets 51-100.....	4,075
UHF Remaining Markets.....	1,150

e. Commercial Television Satellite Stations

23. Commonly owned Television Satellite Stations in any market (authorized pursuant to Note 5 of §73.3555 of the Commission's Rules) that retransmit programming of the primary station are assessed a fee of \$740 annually. Those stations designated as Television Satellite Stations in the 2001 Edition of the Television and Cable Factbook are subject to the fee applicable to Television Satellite Stations. All other television licensees are subject to the regulatory fee payment required for their class of station and market.

f. Construction Permits - Commercial VHF Television Stations

24. This category includes holders of permits to construct new Commercial VHF Television Stations. For FY 2001, VHF permittees will pay an annual regulatory fee of \$3,075. This fee would no longer be applicable when an operating license is issued. Instead, licensees would pay a fee based upon the designated market of the station.

g. Construction Permits - Commercial UHF Television Stations

25. This category includes holders of permits to construct new UHF Television Stations. For FY 2001, UHF Television permittees will pay an annual regulatory fee of \$4,000. This fee would no longer be applicable when an operating license is issued. Instead, licensees would pay a fee based upon the designated market of the station.

h. Construction Permits - Satellite Television Stations

26. The fee for UHF and VHF Television Satellite Station construction permits for FY 2001 is \$480. An individual regulatory fee payment is to be made for each Television Satellite Station construction permit held.

i. Low Power Television, FM Translator and Booster Stations, TV Translator and Booster Stations

27. This category includes Low Power UHF/VHF Television stations operating under part 74 of the Commission's Rules with a transmitter power output limited to 1 kW for a UHF facility and, generally, 0.01 kW for a VHF facility. Low Power Television (LPTV) stations may retransmit the programs and signals of a TV Broadcast Station, originate programming, and/or operate as a subscription service. This category also includes translators and boosters operating under part 74 which rebroadcast the signals of full service stations on a frequency different from the parent station (translators) or on the same frequency (boosters). The stations in this category are secondary to full service stations in terms of frequency priority. We have also received requests for waivers of the regulatory fees from operators of community based Translators. These Translators are generally not affiliated with commercial broadcasters, are nonprofit, non-profitable, or only marginally profitable, serve small rural communities, and are supported financially by the residents of the communities served. We are aware of the difficulties these Translators

have in paying even minimal regulatory fees, and we have addressed those concerns in the ruling on reconsideration of the FY 1994 Report and Order. Community based Translators that meet certain requirements will have their fees waived.¹⁵⁸ For FY 2001, licensees in low power television, FM translator and booster, and TV translator and booster category will pay a regulatory fee of \$305 for each license held.

j. Broadcast Auxiliary Stations

28. This category includes licensees of remote pickup stations (either base or mobile) and associated accessory equipment authorized pursuant to a single license, Aural Broadcast Auxiliary Stations (Studio Transmitter Link and Inter-City Relay) and Television Broadcast Auxiliary Stations (TV Pickup, TV Studio Transmitter Link, TV Relay) authorized under part 74 of the Commission's Rules. Auxiliary Stations are generally associated with a particular television or radio broadcast station or cable television system. This category does not include translators and boosters (see paragraph 26 infra). For FY 2001, licensees of Commercial Auxiliary Stations will pay an \$10 annual regulatory fee on a per call sign basis.

k. Multipoint Distribution Service

29. This category includes Multipoint Distribution Service (MDS), Local Multipoint Distribution (LMDS), and Multichannel Multipoint Distribution Service (MMDS), authorized under parts 21 and 101 of the Commission's Rules to use microwave frequencies for video and data distribution within the United States. For FY 2001, MDS, LMDS, and MMDS stations will pay an annual regulatory fee of \$450 per call sign.

3. Cable Services

a. Cable Television Systems

30. This category includes operators of Cable Television Systems, providing or distributing programming or other services to subscribers under part 76 of the Commission's Rules. For FY 2001, Cable Systems will pay a regulatory fee of \$.49 per subscriber.¹⁵⁹ Payments for Cable Systems are to be made on a per subscriber basis as of December 31, 2000. Cable Systems should determine their subscriber numbers by calculating the number of single family dwellings, the number of individual households in multiple dwelling units, e.g., apartments, condominiums, mobile home parks, etc., paying at the basic subscriber rate, the number of bulk rate customers and the number of courtesy or fee customers. In order to determine the number of bulk rate subscribers, a system should divide its bulk rate charge by the annual subscription rate for individual households. See FY 1994 Report and Order, Appendix B at paragraph 31.

¹⁵⁸ See 10 FCC Rcd 12759, 12762 (1995).

¹⁵⁹ Cable systems are to pay their regulatory fees on a per subscriber basis rather than per 1,000 subscribers as set forth in the statutory fee schedule. See FY 1994 Report and Order at paragraph 100.

b. Cable Antenna Relay Service

31. This category includes Cable Antenna Relay Service (CARS) stations used to transmit television and related audio signals, signals of AM and FM Broadcast Stations, and cablecasting from the point of reception to a terminal point from where the signals are distributed to the public by a Cable Television System. For FY 2001, licensees will pay an annual regulatory fee of \$55 per CARS license.

4. Common Carrier Services**a. Commercial Microwave (Domestic Public Fixed Radio Service)**

32. This category includes licensees in the Point-to-Point Microwave Radio Service, Local Television Transmission Radio Service, and Digital Electronic Message Service, authorized under part 101 of the Commission's Rules to use microwave frequencies for video and data distribution within the United States. These services are now included in the Microwave category (see paragraph 5 supra).

b. Interstate Telephone Service Providers

33. This category includes all providers of local and telephone services to end users. Covered services include the interstate and international portion of wireline local exchange service, local and long distance private line services for both voice and data, dedicated and network packet and packet-like services, long distance message telephone services, and other local and toll services. Providers of such services are referred to herein as "interstate telephone service providers".

Interstate service providers include CAP/CLECs, incumbent local exchange carriers (local telephone operating companies), Interexchange carriers (long distance telephone companies), local resellers, OSPs (operator service providers that enable customers to make away from home calls and to place calls with alternative billing arrangements), payphone service providers, pre-paid card, private service providers, satellite carriers that provide fixed local or message toll services, shared tenant service providers, toll resellers, and other local and other service providers.

To avoid imposing a double payment burden on resellers, we base the regulatory fee on end-user revenues. Interstate telephone service providers, including resellers, must submit fee payments based upon their proportionate share of interstate and international end-user revenues for local and toll services. We use the terms end-user revenues, local service and toll service, based on the methodology used for calculating contributions to the Universal Service support mechanisms.¹⁶⁰

¹⁶⁰ See 1998 Biennial Regulatory Review -- Streamlined Contributor Reporting Requirements Associated with Administration of Telecommunications Relay Services, North American Numbering Plan, Local Number Portability, and

Interstate telephone service providers do not pay the Common Carrier regulatory fee on revenue from the provision of intrastate local and toll services, wireless monthly and local message services, satellite toll services, carrier's carrier telecommunications services, customer premises equipment, Internet service and non-telecommunications services. For FY 2001, carriers must multiply their interstate and international revenue from subject local and toll services by the factor 0.00132 to determine the appropriate fee for this category of service. Regulatees may want to use the following worksheet to determine their fee payment:

Universal Service Support Mechanisms, Report and Order, FCC 99-175, CC Docket No. 98-171 (rel. July 14, 1999), 64 FR 41320 (Jul. 30, 1999) (*Contributor Reporting Requirements Order*).

Calendar 2000 revenue information (show amounts in whole dollars)		
1	Service provided by U.S. carriers that both originates and terminates in foreign points. Form 499-A Line 412 (e)	
2	Interstate end-user revenue from all telecommunications services. Form 499-A Line 420 (d)	
3	International end-user revenue from all telecommunications services except international-to-international. Form 499-A Line 420 (e)	
4	Total end-user Revenues (Sum of lines 1, 2 and 3) Note: also enter this number on Block (28A)- "FCC Code 1".	
5	End-user interstate mobile service monthly and activation charges. Form 499-A Line 409 (d)	
6	End-user international mobile service monthly and activation charges. Form 499-A Line 409 (e)	
7	End-user interstate mobile service message charges including roaming charges but excluding toll charges. Form 499-A Line 410 (d)	
8	End-user international mobile service message charges including roaming charges but excluding toll charges. Form 499-A Line 410 (e)	
9	End-user interstate satellite service. Form 499-A Line 416 (d)	
10	End-user international satellite service. Form 499-A Line 416 (e)	
11	Surcharges on mobile and satellite services identified as recovering universal service contributions and included in line 403 (d) or 403 (e) on your FCC Form 499. [Note: you may not include surcharges applied to local or toll services, nor any surcharges identified as intrastate surcharges.]	
12	Revenues from resellers that do not contribute to USF. Form 499-A Line 511 (b)	
13	Total excluded end-user revenues. (Sum lines 5 through 12.) Note: also enter this number on Block (29A)- "FCC Code 2".	
14	Total subject revenue. (Line 4 minus Line 13) Note: also enter this number on Block (25A)- "Quantity".	
15	Common carrier fee factor	.00132
16	2000 Regulatory Fee (Line 14 times Line 15)* Note: also enter this number on Block (27A)- "Total Fee"	
* You are exempt from filing if the amount on line 16 is less than \$10.		

5. International Services

a. Earth Stations

34. Very Small Aperture Terminal (VSAT) Earth Stations, equivalent C-Band Earth Stations and antennas, and earth station systems comprised of very small aperture terminals operate in the 12 and 14 GHz bands and provide a variety of communications services to other stations in the network. VSAT systems consist of a network of technically-identical small Fixed-Satellite Earth Stations which often include a larger hub station. VSAT Earth Stations and C-Band Equivalent Earth Stations are authorized pursuant to part 25 of the Commission's Rules. Mobile Satellite Earth Stations, operating pursuant to part 25 of the Commission's Rules under blanket licenses for mobile antennas (transceivers), are smaller than one meter and provide voice or data communications, including position location information for mobile platforms such as cars, buses, or trucks.¹⁶¹ Fixed-Satellite Transmit/Receive and Transmit-Only Earth Station antennas, authorized or registered under part 25 of the Commission's Rules, are operated by private and public carriers to provide telephone, television, data, and other forms of communications. Included in this category are telemetry, tracking and control (TT&C) earth stations, and earth station uplinks. For FY 2000, licensees of VSATs, Mobile Satellite Earth Stations, and Fixed-Satellite For FY 2001, Transmit/Receive and Transmit-Only Earth Stations will pay a fee of \$180 per authorization or registration as well as a separate fee of \$180 for each associated Hub Station.

35. Receive-only earth stations. For FY 2001, there is no regulatory fee for receive-only earth stations.

b. Space Stations (Geostationary Orbit)

36. Geostationary Orbit (also referred to as Geosynchronous) Space Stations are domestic and international satellites positioned in orbit to remain approximately fixed relative to the earth. Most are authorized under part 25 of the Commission's Rules to provide communications between satellites and earth stations on a common carrier and/or private carrier basis. In addition, this category includes Direct Broadcast Satellite (DBS) Service which includes space stations authorized under part 100 of the Commission's rules to transmit or re-transmit signals for direct reception by the general public encompassing both individual and community reception. For FY 2001, entities authorized to operate geostationary space stations (including DBS satellites) will be assessed an annual regulatory fee of \$98,125 per operational station in orbit. Payment is required for any geostationary satellite that has been launched and tested and is authorized to provide service.

c. Space Stations (Non-Geostationary Orbit)

37. Non-Geostationary Orbit Systems (such as Low Earth Orbit (LEO) Systems) are space stations that

¹⁶¹ Mobile earth stations are hand-held or vehicle-based units capable of operation while the operator or vehicle is in motion. In contrast, transportable units are moved to a fixed location and operate in a stationary (fixed) mode. Both are assessed the same regulatory fee for FY 2001.

orbit the earth in non-geosynchronous orbit. They are authorized under part 25 of the Commission's rules to provide communications between satellites and earth stations on a common carrier and/or private carrier basis. For FY 2001, entities authorized to operate Non-Geostationary Orbit Systems (NGSOs) will be assessed an annual regulatory fee of \$94,425 per operational system in orbit. Payment is required for any NGSO System that has one or more operational satellites operational. In our FY 1997 Report and Order at paragraph 75 we retained our requirement that licensees of LEOs pay the LEO regulatory fee upon their certification of operation of a single satellite pursuant to section 25.120(d). We require payment of this fee following commencement of operations of a system's first satellite to insure that we recover our regulatory costs related to LEO systems from licensees of these systems as early as possible so that other regulatees are not burdened with these costs any longer than necessary. Because section 25.120(d) has significant implications beyond regulatory fees (such as whether the entire planned cluster is operational in accordance with the terms and conditions of the license) we previously clarified our definition of an operational LEO satellite to prevent misinterpretation of our intent as follows:

Licensees of Non-Geostationary Satellite Systems (such as LEOs) are assessed a regulatory fee upon the commencement of operation of a system's first satellite as reported annually pursuant to §§ 25.142(c), 25.143(e), 25.145(g), or upon certification of operation of a single satellite pursuant to § 25.120(d).

d. International Bearer Circuits

38. Regulatory fees for International Bearer Circuits are to be paid by facilities-based common carriers (either domestic or international) activating the circuit in any transmission facility for the provision of service to an end user or resale carrier. Payment of the fee for bearer circuits by non-common carrier submarine cable operators is required for circuits sold on an indefeasible right of use (IRU) basis or leased to any customer, including themselves or their affiliates, other than an international common carrier authorized by the Commission to provide U.S. international common carrier services. See FY 1994 Report and Order at 5367. Payment of the international bearer circuit fee is also required by non-common carrier satellite operators for circuits sold or leased to any customer, including themselves or their affiliates, other than an international common carrier authorized by the Commission to provide U.S. international common carrier services. The fee is based upon active 64 kbps circuits, or equivalent circuits. Under this formulation, 64 kbps circuits or their equivalent will be assessed a fee. Equivalent circuits include the 64 kbps circuit equivalent of larger bit stream circuits. For example, the 64 kbps circuit equivalent of a 2.048 Mbps circuit is 30 64 kbps circuits. Analog circuits such as 3 and 4 kHz circuits used for international service are also included as 64 kbps circuits. However, circuits derived from 64 kbps circuits by the use of digital circuit multiplication systems are not equivalent 64 kbps circuits. Such circuits are not subject to fees. Only the 64 kbps circuit from which they have been derived will be subject to payment of a fee. For FY 2001, the regulatory fee is \$5 for each active 64 kbps circuit or equivalent. For analog television channels we will assess fees as follows:

Analog Television Channel Size in MHz	No. of equivalent 64 kbps Circuits
36.....	630
24.....	288
18.....	240

e. International Public Fixed

39. This fee category includes common carriers authorized under part 23 of the Commission's Rules to provide radio communications between the United States and a foreign point via microwave or HF troposcatter systems, other than satellites and satellite earth stations, but not including service between the United States and Mexico and the United States and Canada using frequencies above 72 MHz. For FY 2001, International Public Fixed Radio Service licensees will pay a \$1,275 annual regulatory fee per call sign.

f. International (HF) Broadcast

40. This category covers International Broadcast Stations licensed under part 73 of the Commission's Rules to operate on frequencies in the 5,950 kHz to 26,100 kHz range to provide service to the general public in foreign countries. For FY 2001, International HF Broadcast Stations will pay an annual regulatory fee of \$680 per station license.

Attachment G

Description of FCC Activities

Licensing: This activity includes the authorization or licensing of radio stations, telecommunications equipment and radio operators, as well as the authorization of common carrier and other services and facilities. Includes direct organizational FTE and FTE workyear effort provided by staff offices to support policy direction, program development, legal services, and executive direction, as well as support services associated with licensing activities.

Competition: This activity includes formal inquiries, rulemaking proceedings to establish or amend the Commission's rules and regulations, action on petitions for rulemaking, and requests for rule interpretations or waivers; economic studies and analyses; spectrum planning, modeling, propagation-interference analyses and allocation; and development of equipment standards. Includes direct organizational FTE and FTE workyear effort provided by staff offices to support policy direction, program development, legal services, and executive direction, as well as support services associated with activities to promote competition.

Enforcement: This activity includes enforcement of the Commission's rules, regulations and authorizations, including investigations, inspections, compliance monitoring, and sanctions of all types. Also includes the receipt and disposition of formal and informal complaints regarding common carrier rates and services, the review and acceptance/rejection of carrier tariffs, and the review, prescription and audit of carrier accounting practices. Includes direct organizational FTE and FTE workyear effort provided by staff offices to support policy direction, program development, legal services, and executive direction, as well as support services associated with enforcement activities.

Consumer Information Services: This activity includes the publication and dissemination of Commission decisions and actions, and related activities; public reference and library services; the duplication and dissemination of Commission records and databases; the receipt and disposition of public inquiries; consumer, small business, and public assistance; and public affairs and media relations. Includes direct organizational FTE and FTE workyear effort provided by staff offices to support policy direction, program development, legal services, and executive direction, as well as support services associated with consumer information activities.

Spectrum Management: This activity includes management of the electromagnetic spectrum as mandated by the Communications Act of 1934, as amended. Spectrum management includes the structure and processes for allocating, allotting, assigning, and licensing this scarce resource to the private sector and state and local governments in a way

that promotes competition while ensuring that the public interest is best served. In order to manage spectrum in both an efficient and equitable manner, the Commission prepares economic, technical and engineering studies, coordinates with federal agencies, and represents U. S. industry in international for a. Includes direct organizational FTE and FTE workyear effort provided by staff offices to support policy direction, program development, legal services, and executive direction, as well as support services associated with spectrum management activities.

Attachment H**Factors, measurements and calculations that go into determining station signal contours and associated population coverages****AM Stations**

Specific information on each day tower, including field ratio, phasing, spacing and orientation was retrieved, as well as the theoretical pattern RMS figure (mV/m @ 1 km) for the antenna system. The standard, or modified standard if pertinent, horizontal plane radiation pattern was calculated using techniques and methods specified in sections 73.150 and 73.152 of the Commission's rules.¹⁶² Radiation values were calculated for each of 72 radials around the transmitter site (every 5 degrees of azimuth). Next, estimated soil conductivity data was retrieved from a database representing the information in FCC Figure M3. Using the calculated horizontal radiation values, and the retrieved soil conductivity data, the distance to the city grade (5 mV/m) contour was predicted for each of the 72 radials. The resulting distance to city grade contours were used to form a geographical polygon. Population counting was accomplished by determining which 1990 block centroids were contained in the polygon. The sum of the population figures for all enclosed blocks represents the total population for the predicted city grade coverage area.

FM Stations

The maximum of the horizontal and vertical HAAT (m) and ERP (kW) was used. Where the antenna HAMSL was available, it was used in lieu of the overall HAAT figure to calculate specific HAAT figures for each of 72 radials under study. Any available directional pattern information was applied as well, to produce a radial-specific ERP figure. The HAAT and ERP figures were used in conjunction with the propagation curves specified in section 73.313 of the Commission's rules to predict the distance to the city grade (70 dBuV/m or 3.17 mV/m) contour for each of the 72 radials.¹⁶³ The resulting distance to city grade contours were used to form a geographical polygon. Population counting was accomplished by determining which 1990 block centroids were contained in the polygon. The sum of the population figures for all enclosed blocks represents the total population for the predicted city grade coverage area.

¹⁶² 47 CFR 73.150 and 73.152.

¹⁶³ 47 CFR 73.313.